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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,634	04/21/2004	Wesley Nelson	12034/US/2	5315
20686	7590	04/20/2005	EXAMINER	
DORSEY & WHITNEY, LLP INTELLECTUAL PROPERTY DEPARTMENT 370 SEVENTEENTH STREET SUITE 4700 DENVER, CO 80202-5647			GORMAN, DARREN W	
		ART UNIT		PAPER NUMBER
		3752		
DATE MAILED: 04/20/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/828,634	NELSON ET AL.
	Examiner	Art Unit
	Darren W Gorman	3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 28 March 2005.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-13, 16-30 and 32-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-13, 16-30 and 32-37 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 28 March 2005 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Drawings

1. The replacement drawing sheets were received on March 28, 2005. These drawings are acceptable with regard to overcoming the formal objections as set forth in paragraphs 1 and 2 of the Office Action mailed November 30, 2004. However, the drawings are not acceptable to overcome the formal objection under 37 CFR 1.83(a) with regard to the drawings not showing the feature specified in claim 29, as set forth in paragraph 3 on pages 3-4 of the Office Action mailed November 30, 2004.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “hose connection” being positioned in the “second member proximate the connection between the first and second members” as recited in claim 29, must be shown or the feature canceled from the claim. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the

drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 5, 9, 10, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Esposito et al., USPN 5,540,284.

Regarding claims 1, 2, 5, 17, and 18, Esposito et al. shows a piercing hose nozzle comprising: a first elongated, hollow member (1) having first (2') and second (2) ends, the second end comprising a hose connector (3); a second elongated, hollow member (4) having first and second ends, wherein the first end of the second member is connected at a 90-degree angle to the first end of the first member at a connection that allows fluid to be communicated from the first member to the second member, and wherein the second member defines a plurality of holes (18, 18a) proximate the second end of the second member (see Figures 1, 2, and 5), wherein the second member is shorter than the first member (see Figures 1 and 2); an anvil connected to the

second member proximate the first end of the second member; and a piercing tip (7) connected to the second end of the second member, the piercing tip having a sharpened end forming an angle of approximately 20 degrees relative to a longitudinal axis of the second member. NOTE: With regard to the “anvil” being “connected to” the second member, the first end of the second member shown by Esposito et al. includes an anvil portion which the user would strike with a “fire ax or sledge or a large hammer” to assist in forcing the piercing tip (7) and second member through a solid barrier (see column 7, lines 34-38). Since this anvil portion is integral with the second member (4), then it meets the definition of being “connected to”. Further, Esposito et al., teaches using hardened steel for forming the anvil portion and the tip (see column 5, line 65 through column 6, line 15).

Regarding claims 9 and 10, Esposito et al. expressly discloses that the length of the first elongated member “may be between 30 to 50 inches” or more in length (see column 5, lines 40-41). With respect to claim 9, in view of the expressly disclosed length range of the first elongated member, and in view of the relative lengths of the first member vs. the second member as shown in Figures 1 and 2, it appears that the device shown by Esposito et al. anticipates the claimed length range of the second elongated member as well.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3, 4, 16, 19, 24, 25, and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt et al., Patent Publication No. US2002/0179307, in view of Esposito et al.

Schmidt et al. shows a piercing hose nozzle (see Figures 1-6, 10, and 11) comprising: first (hose connection tube shown in Figures 10 and 11) and second (1) rigid, cylindrical, elongated hollow members each having first and second ends, wherein the first end of the second member is connected to the first end of the first member at a connection allowing fluid to be communicated from the first member to the second member; a hose connection at the second end of the first member; an anvil (in the embodiment shown in Figures 10 and 11; and described in paragraph [0028]) comprising a fixed portion threaded to the first end of the second member and a striking portion exposed and configured for striking by a sledge, the anvil being coaxial with the second member; and a piercing tip (2) connected to the second end of the second member. Schmidt et al. also shows the second member defining a plurality of holes (7) circumferentially spaced around a sidewall of the second member proximate the second end of the second member for directing water outward from the longitudinal axis of the second member.

However, Schmidt et al. does not expressly teach forming the first member to be longer than the second member, nor does Schmidt et al. expressly teach the first and second members each being formed of 1.5 inch diameter steel tubing, wherein the tubing is .120 inches thick, nor does Schmidt et al. expressly teach the anvil portion being formed from “hardened steel”. Note: Schmidt et al. expressly states that each of the various parts of the piercing nozzle apparatus shown may be constructed from various materials having different shapes, lengths, weights, strengths, etc. (see paragraph [0048], lines 1-4, 12-14, 20-23, and 29-33) depending on the

intended use of the apparatus. Schmidt et al. further does not expressly teach connecting a handle to the first elongated member and to the anvil. Still further, Schmidt et al. does not expressly teach the device wherein the hose connection is positioned in the second member proximate the connection between the first and second members.

Esposito et al. teaches a piercing hose nozzle (see Figures 1, 2, and 5) including first (1) and second (4) elongated, hollow members, the first member having first (2') and second (2) ends, the second end comprising a hose connector (3); and the second member having first and second ends, wherein the first end of the second member is connected to the first end of the first member at a connection that allows fluid to be communicated from the first member to the second member (see Figure 5), the first end of the second member forming an anvil portion made from hardened steel (see column 5, line 67 through column 6, line 6) and the second end of the second member having a piercing tip (7) attached thereto, and wherein the second member defines a plurality of holes (18, 18a) proximate the second end of the second member (see Figures 1, 2, and 5), and wherein the first member is longer than the second member (see Figures 1 and 2), whereby the first member forms an elongated handle element allowing a firefighter to maintain a safe distance from the fire to be extinguished thereby allowing the firefighter to strike the anvil portion with a separate tool to drive the piercing tip through a barrier when the device is used in closed or cramped quarters (see column 7, lines 22-41).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to lengthen the first member of the apparatus shown by Schmidt et al. such that the length of the first member is substantially longer than the length of the second member, as taught by Esposito et al., in order to allow a firefighter to maintain a safe distance from the

fire to be extinguished while still allowing for the firefighter to employ a separate tool to strike the anvil connected to the second member to drive the piercing tip through a barrier when the device is used in closed or cramped quarters.

Further, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the anvil portion of the device shown by Schmidt et al. from hardened steel, as taught by Esposito et al., in order to provide durability and resistance to corrosion, and since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious choice.

In re Leshin, 125 USPQ 416 (CCPA 1960).

Regarding the cross-sectional dimensions of the first and second members as being 1.5 inch diameter / .120 inch thick steel tubing, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use 1.5 inch diameter steel tubing having a thickness of .120 inches for forming the first and second elongated members of Schmidt et al., since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious choice. *In re Leshin*, 125 USPQ 416 (CCPA 1960).

Regarding the recitation wherein the device further comprises a handle connected to the first elongated member and to the anvil, it would have been obvious to one having ordinary skill in the art at the time the invention was made to connect a handle to the first member and anvil of Schmidt et al., since the Examiner takes Official Notice that the use of handles are common and well known in hand-held firefighting piercing nozzles in order for a firefighter to safely and effectively grasp, hold, and/or carry the device.

Regarding the alternative position of the hose connection as being in the second member proximate the connection between the first and second members, it would have been obvious to one having ordinary skill in the art at the time the invention was made to locate the hose connection shown by Schmidt et al. at any desired location on the device, such as in the second member proximate the connection between the first and second members, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70.

7. Claims 6-8 and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Esposito et al., in view of Lang, USPN 4,882,956.

Regarding claims 6-8, 34 and 35, Esposito et al. shows an “axe-style” piercing hose nozzle apparatus comprising: a first rigid elongated, hollow member (1) having first (2') and second (2) ends, the second end comprising a hose connector (3), wherein a grip (9) capable of facilitating a person’s grasp of the first member is embodied between the first and second ends of the first member; a second rigid elongated, hollow member (4) having first and second ends, wherein the first end of the second member is connected at a 90-degree angle to the first end of the first member at a connection that allows fluid to be communicated from the first member to the second member, wherein the second member is shorter in length than the first member, wherein the second member comprises a piercing tip (7), and wherein the second member defines a plurality of holes (18, 18a) proximate the piercing tip that allow fluid to escape the second member (see Figures 1, 2, and 5); and an anvil connected to the second member proximate the first end of the second member. NOTE: With regard to the “anvil” being

“connected to” the second member, the first end of the second member shown by Esposito et al. includes an anvil portion which the user would strike with a “fire ax or sledge or a large hammer” to assist in forcing the piercing tip (7) and second member through a solid barrier (see column 7, lines 34-38). Since this anvil portion is integral with the second member (4), then it meets the definition of being “connected to”.

However, Esposito et al. does not expressly teach a hand guard connected to the first member and positioned proximate the grip such that the when a user’s hand is grasping the grip, the user’s hand is guarded by the hand guard. Further, although Esposito et al. does expressly teach a hand grip member (9) attached to the first member, Esposito does not expressly teach the grip comprising a ridge running along the first member. (The grip shown by Esposito et al. is annular and is wrapped completely around the entire circumference of a portion of the first elongated member (1).)

Lang shows a hand-held tool with a piercing tip (3), which is swung by a user in the same manner as an ax, the tool including first and second elongated members, the first member being longer in length than the second member, wherein a hand grip is embodied on the first member having a hand guard (4), wherein the hand guard has first and second ends each connected to the first member, wherein the hand guard and the first member define a plane, wherein the grip comprises a ridge (1) connected to the first member (see Figures 1 and 3), and wherein the ridge runs along the first member between the first and second ends of the hand guard, within the plane, such that the user is able to maintain a better grip on the handle and the user’s hand is adequately protected when the device is in use (see column 1, lines 56-61; and column 3, lines 9-15).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the hand grip shown by Esposito et al., with the ridge-type grip and hand guard, as taught by Lang, such that the user is able to maintain a better grip on the first member and the user's hand is adequately protected when the device is in use.

Regarding claims 36 and 37, Esposito et al. shows all of the claimed limitations as set forth in claim 1, however Esposito does not expressly teach the device further comprising a hand guard having first and second ends each connected to the first member, wherein the hand guard and the first member define a plane. Further, although Esposito et al. does expressly teach a hand grip member (9) attached to the first member, Esposito does not expressly teach the grip comprising a ridge running along the first member. (The grip shown by Esposito et al. is annular and is wrapped completely around the entire circumference of the first elongated member.)

Lang shows a hand-held tool with a piercing tip (3), which is swung by a user in the same manner as an ax, the tool including first and second elongated members, the first member being longer in length than the second member, wherein a hand grip is embodied on the first member having a hand guard (4), wherein the hand guard has first and second ends each connected to the first member, wherein the hand guard and the first member define a plane, wherein the grip comprises a ridge (1) connected to the first member (see Figures 1 and 3), and wherein the ridge runs along the first member between the first and second ends of the hand guard, within the plane, such that the user is able to maintain a better grip on the handle and the user's hand is adequately protected when the device is in use (see column 1, lines 56-61; and column 3, lines 9-15).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the grip shown by Esposito et al., with the ridge-type grip and hand guard, as taught by Lang, such that the user is able to maintain a better grip on the first member and the user's hand is adequately protected when the device is in use.

8. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Esposito et al., in view of Relyea et al., USPN 5,301,756.

Esposito et al. shows all of the limitations as recited in claim 1, however a stop comprising a metal plate that is wider than the second elongated member and is connected to the second elongated member at a distance of 12-20 inches from a sharpened end of the piercing tip is not expressly disclosed.

Relyea et al. teaches a piercing nozzle having a stop plate (69) connected to an elongated member (71), the elongated member including a piercing tip and spray unit (67) for spraying fire retardant into a designated area once the piercing tip has punctured through a wall of the area to be sprayed, the stop plate positioned on the elongated member at a desired distance (expressly taught here to be 18 inches) from the piercing point, in order to protect the nozzle by limiting the distance the piercing nozzle can penetrate the wall (see Figure 8; and column 8, lines 5-31). Note, other embodiments shown by Relyea et al., but not discussed in the written description, also have a stop plate mounted on an elongated member of a piercing nozzle assembly (184) (see Figures 18 and 19).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a stop plate, as taught by Relyea et al., mounted on the second

elongated member at any desired distance from the sharpened end of the piercing tip shown by Esposito et al., in order to protect the nozzle by limiting the distance the piercing nozzle can penetrate the wall, said distance being selected by the user based on intended use of the apparatus (i.e. thickness of the barrier being penetrated, location of the fire, type of fire, etc.).

Regarding the recitation that the stop plate is made from “metal”, although Relyea et al. is silent as to what type of material is used to form the stop plate, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use metal for forming the stop plate, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious choice.

In re Leshin, 125 USPQ 416 (CCPA 1960).

9. Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt et al. as modified and applied to claims 1 and 19 above, and further in view of Mitchell, USPN 5,253,716.

Schmidt et al., as modified, shows all of the claimed limitations as set forth in claims 1 and 19, however Schmidt et al. does not expressly show the holes being formed in at least two circumferential grooves and spaced within the grooves in pairs, wherein the holes spaced within the grooves are aligned at 45-degree angles relative to the longitudinal axis, and wherein holes formed in a first groove are offset relative to holes in an adjacent second groove.

Mitchell teaches a piercing hose nozzle comprising: first (40) and second (22, 24, 26) rigid, cylindrical, elongated hollow members each having first and second ends, wherein the first end of the second member is connected to the first end of the first member at a connection

allowing fluid to be communicated from the first member to the second member, and wherein the second member includes a plurality of holes (20) proximate the second end of the second member for directing water outward from the longitudinal axis of the second member, the holes being formed in two circumferential grooves (58) and spaced within the grooves in pairs, wherein the holes spaced within the grooves are aligned at 45-degree angles (A) relative to the longitudinal axis, and wherein holes formed in the first groove are offset relative to holes in an adjacent second groove (see Figure 2), such nozzle hole/groove arrangement improving atomization of the fire retardant liquid while additionally serving to protect aperture exit points from being plugged when the firefighting tool is used to pierce a structure (see column 5, lines 7-14, and lines 41-49).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the holes in the sidewall of the second member of Schmidt et al., to have an arrangement wherein the holes are formed in at least two circumferential grooves and spaced within the grooves in pairs, wherein the holes spaced within the grooves are aligned at 45-degree angles relative to the longitudinal axis, and wherein holes formed in the first groove are offset relative to holes in an adjacent second groove, as taught by Mitchell, in order to improve atomization of the fire retardant liquid and to also protect the holes from being plugged when the tool is used to pierce a structure.

10. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt et al., as modified and applied to claim 25 above, and further in view of Relyea et al.

Schmidt et al., as modified, shows all of the claimed limitations as set forth in claim 25,

however Schmidt et al. does not expressly teach the apparatus further comprising a stop positioned between the holes and the connection between the first and second members.

Relyea et al. teaches a piercing nozzle having a stop plate (69) connected to an elongated member (71), the elongated member including a piercing tip and spray unit (67) for spraying fire retardant into a designated area once the piercing tip has punctured through a wall of the area to be sprayed, the stop plate positioned on the elongated member at a desired distance (expressly taught here to be 18 inches) from the piercing point, in order to protect the nozzle by limiting the distance the piercing nozzle can penetrate the wall (see Figure 8; and column 8, lines 5-31).

Note, other embodiments shown by Relyea et al., but not discussed in the written description, also have a stop plate mounted on an elongated member of a piercing nozzle assembly (184) (see Figures 18 and 19).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a stop plate, as taught by Relyea et al., mounted on the second elongated member at any desired distance from the sharpened end of the piercing tip shown by Schmidt et al., in order to protect the nozzle by limiting the distance the piercing nozzle can penetrate the wall, said distance being selected by the user based on intended use of the apparatus (i.e. thickness of the barrier being penetrated, location of the fire, type of fire, etc.).

11. Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Esposito et al., in view of Lang and Relyea et al.

Esposito et al. shows a piercing nozzle (see Figures 1, 2, 5, and 9) that attaches to a hose,

comprising: means (7) for piercing a first side of a wall; means (18, 18a) for dispersing a fluid to a second side of a wall; means (3) for connecting to a hose (10) containing the fluid; means (hollow inside channels of members 1 and 4) for communicating the fluid from the means for connecting to the means for dispersing; means (9) for gripping the apparatus running along the means for communicating; and means (see column 7, lines 27-38) for urging the means for piercing through the wall to the second side after the means for piercing has initially pierced the wall, while the means for piercing is positioned in the wall, wherein the means for dispersing comprises means for dispersing the fluid radially outward from the means for piercing (see column 6, lines 36-38).

However, although Esposito et al. does expressly teach a means (9) for gripping the apparatus running along the means (1, 4) for communicating, Esposito et al. does not expressly teach the means for gripping the apparatus comprising a ridge. (The means for gripping shown by Esposito et al. is annular and is wrapped completely around the entire circumference of a portion of elongated member (1).) Further, Esposito et al. does not expressly teach a means for limiting distance by which the means for piercing (7) passes through the wall.

Lang shows a hand-held tool with a piercing tip (3), which is swung by a user in the same manner as an ax, the tool including first and second elongated members, the first member comprising a handle, wherein a hand grip is embodied on the handle, the hand grip comprising a ridge (1) running along the handle (see Figures 1 and 3), such that the user is able to maintain a better grip on the handle when in use.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the means for gripping the apparatus shown by Esposito et al.,

with the ridge-type hand grip, as taught by Lang, such that the user is able to maintain a better grip on the means for communicating when the device is in use.

Relyea et al. teaches a piercing nozzle having a stop plate (69) connected to an elongated member (71), the elongated member including a piercing tip and spray unit (67) for spraying fire retardant into a designated area once the piercing tip has punctured through a wall of the area to be sprayed, the stop plate positioned on the elongated member at a desired distance (expressly taught here to be 18 inches) from the piercing point, in order to protect the nozzle by limiting the distance the piercing nozzle can penetrate the wall (see Figure 8; and column 8, lines 5-31). Note, other embodiments shown by Relyea et al., but not discussed in the written description, also have a stop plate mounted on an elongated member of a piercing nozzle assembly (184) (see Figures 18 and 19).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a stop plate, as taught by Relyea et al., mounted on the elongated member (4) of the means for communicating, shown by Esposito et al., in order to protect the means for dispersing by limiting the distance the elongated member (4) of the means for communicating can penetrate the wall.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darren W Gorman whose telephone number is 571-272-4901. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on 571-272-4901. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Darren W Gorman
Examiner
Art Unit 3752

DWG 4/13/05

DWG
April 13, 2005



David A. Scherbel
Supervisory Patent Examiner
Group 3700